

WHAT IS CLAIMED IS:

1. An IDSL line card comprising:

at least one IDSL line interface having an adjustable bit rate comprising:

5 a microcontroller operable to control the bit rate associated with the at least one line interface, the microcontroller comprising:

 a processor; and

10 a memory associated with the processor and storing a rate adapter application, the rate adapter application operable, when executed on the processor, to:

 receive an error level associated with transfer of data through the at least one IDSL line interface;

15 determine that the received error level exceeds a maximum error level; and

 in response to determining that the maximum error level is exceeded, adjust the bit rate for the at least one IDSL line interface and determine that a resulting error level meets or falls below the maximum error level.

25 2. The line card of Claim 1, wherein the error level

is a CRC error level.

30 3. The line card of Claim 1, wherein the rate adapter application is further operable to adjust the bit rate, in response to determining that the maximum error level is exceeded, by increasing or decreasing the bit rate.

4. The line card of Claim 1, wherein at least one
IDSL line interface comprises eight IDSL line interfaces.

5. The line card of Claim 1, wherein the rate
adapter application is further operable, when executed on
the processor, to access a bit rate table to determine an
adjusted bit rate.

10 6. The line card of Claim 1, wherein the rate
adapter application is further operable, when executed on
the processor, to apply a default bit rate if the error
level associated with transfer of data through at least one
IDSL line interface exceeds the maximum error level and has
traversed an associated bit rate table.

7. A method for communicating data according to ISDN protocol comprising:

connecting a first IDSL line interface to a second IDSL line interface, the second IDSL line interface at a location remote from the first IDSL line interface, the first IDSL line interface having a first bit rate, and the second IDSL line interface having a second bit rate;

transmitting data between the first IDSL line interface and the second IDSL line interface;

determining that a CRC level associated with the data transfer exceeds a predetermined acceptable level; and

adjusting the second bit rate until a CRC level associated with subsequent data transfer between the first and second IDSL line interfaces meets or falls below the predetermined acceptable level.

8. The method of Claim 7, wherein connecting a first IDSL line interface to a second IDSL line interface comprises connecting an IDSL line interface at a customer's premises to an IDSL line interface at a telecommunications central office.

9. The method of Claim 7, wherein the second IDSL line interface is located at a customer's premises.

10. The method of Claim 7, wherein the first IDSL line interface is located at a customer's premises.

11. The method of Claim 7, wherein the second IDSL line interface is located within a DSLAM.

12. The method of Claim 7, wherein adjusting the second bit rate comprises accessing a bit rate table.

13. The method of Claim 7, wherein transmitting data comprises transmitting at least an HDLC frame.

DRAFTS * PROOFS * SUGGESTIONS

14. A method of establishing data communication according to ISDN protocol comprising:

- 5 connecting a first IDSL line interface to a first end of an ISDN line;
- connecting a second IDSL line interface to a second end of the ISDN line;
- 10 setting a bit transfer rate of the first IDSL line interface to a first bit rate;
- setting a bit transfer rate of the second IDSL line interface to a second bit rate;
- transmitting data between the first and second IDSL line interfaces;
- 15 determining a CRC level associated with the data transmission;
- comparing the determined CRC level to an acceptable error level;
- 20 adjusting the bit transfer rate of the second IDSL line interface in response to at least a determination based on the comparison that the CRC level associated with the data transmission exceeds the acceptable error level; and
- 25 repeating the steps of transmitting data, determining a CRC level, comparing the determined CRC level, and adjusting the bit transfer rate until the determined CRC level equals or falls below the threshold level.

- 30 15. The method of Claim 14, wherein connecting the first IDSL line interface connecting the first IDSL line interface to a first end of an ISDN line comprises connecting an IDSL line interface located at a customer's premises to the first end of an ISDN line.

16. The method of Claim 14, wherein connecting the first IDSL line interface to a first end of an ISDN line comprises connecting an IDSL line interface located remote from a customer's premises to the first end of an ISDN line.

17. The method of Claim 14, wherein adjusting the bit transfer rate comprises accessing a bit rate table.

18. The method of Claim 14, wherein transmitting data comprises transmitting at least an HDLC frame.

19. The method of Claim 14, wherein adjusting the bit transfer rate of the second IDSL line interface comprises adjusting, by the second IDSL line interface, the bit transfer rate of the second IDSL line interface.

20. The method of Claim 14, wherein adjusting the bit transfer rate of the second IDSL line interface comprises adjusting, by a computer located remote from the second IDSL line interface, the bit transfer rate of the second IDSL line interface.

21. A system for facilitating communication of data according to ISDN protocol comprising:

a first means located proximate a first location and a second means located proximate a second location for modulating and demodulating data exchanged between the first and second locations;

5 a line means connecting the first means and the second means for carrying data exchanged between the first and second locations according to ISDN protocol; and

10 a controller means for determining that data exchanged between the first and second means has an associated error level that exceeds a desired level and in response adjusting a bit rate associated with the second means until the associated error level reaches or falls below a threshold level.

U.S. PATENT AND TRADEMARK OFFICE

22. An IDSL line card comprising:
at least one line interface;
an ISDN chipset electrically connected to each of the
at least one line interface;
5 a microcontroller electrically connected to the ISDN
chipset, the microcontroller comprising:
a processor; and
a memory associated with the processor and
storing a rate adapter application, the rate adapter
10 application operable, when executed on the processor
to:
receive data received by one of the at least one
line interface, the data including an error
indication;
determine that an error level is exceeded; and
in response to determining that the maximum error
level is exceeded, adjust the bit rate of the modem
from which data are received to a different bit rate.

23. A system for facilitating communication of data comprising:

first and second ISDN line interfaces; and
a controller comprising:

5 a memory; and

a rate adapter program stored in the memory, the
rate adapter program operable to determine that data
exchanged between the first and second IDSL line
interfaces has an associated error level that exceeds
10 a desired level and in response adjust a bit rate
associated with the first IDSL line interface until
the associated error level reaches or falls below a
threshold level.

15 24. The system of Claim 23, wherein the controller
comprises a personal computer.

20 25. The system of Claim 23, wherein the controller
comprises a microcontroller stored on a line card, the line
card also storing the first IDSL line interface.